

SEQUENCE LISTING

<110> Takeda Chemical Industries, Ltd.

<120> RFRP Receptor Antagonist

<130> 3169WOOP

<150> JP 2003-114313

<151> 2003-04-18

<160> 4

<210> 1

<211> 430

<212> PRT

<213> Human

<400> 1

Met Glu Gly Glu Pro Ser Gln Pro Pro Asn Ser Ser Trp Pro Leu Ser

1 5 10 15

Gln Asn Gly Thr Asn Thr Glu Ala Thr Pro Ala Thr Asn Leu Thr Phe

20 25 30

Ser Ser Tyr Tyr Gln His Thr Ser Pro Val Ala Ala Met Phe Ile Val

35 40 45

Ala Tyr Ala Leu Ile Phe Leu Leu Cys Met Val Gly Asn Thr Leu Val

50 55 60

Cys Phe Ile Val Leu Lys Asn Arg His Met His Thr Val Thr Asn Met

65 70 75 80

Phe Ile Leu Asn Leu Ala Val Ser Asp Leu Leu Val Gly Ile Phe Cys

85 90 95

Met Pro Thr Thr Leu Val Asp Asn Leu Ile Thr Gly Trp Pro Phe Asp

100 105 110

Asn Ala Thr Cys Lys Met Ser Gly Leu Val Gln Gly Met Ser Val Ser

115 120 125

Ala Ser Val Phe Thr Leu Val Ala Ile Ala Val Glu Arg Phe Arg Cys
 130 135 140
 Ile Val His Pro Phe Arg Glu Lys Leu Thr Leu Arg Lys Ala Leu Val
 145 150 155 160
 Thr Ile Ala Val Ile Trp Ala Leu Ala Leu Leu Ile Met Cys Pro Ser
 165 170 175
 Ala Val Thr Leu Thr Val Thr Arg Glu Glu His His Phe Met Val Asp
 180 185 190
 Ala Arg Asn Arg Ser Tyr Pro Leu Tyr Ser Cys Trp Glu Ala Trp Pro
 195 200 205
 Glu Lys Gly Met Arg Arg Val Tyr Thr Thr Val Leu Phe Ser His Ile
 210 215 220
 Tyr Leu Ala Pro Leu Ala Leu Ile Val Val Met Tyr Ala Arg Ile Ala
 225 230 235 240
 Arg Lys Leu Cys Gln Ala Pro Gly Pro Ala Pro Gly Gly Glu Glu Ala
 245 250 255
 Ala Asp Pro Arg Ala Ser Arg Arg Ala Arg Val Val His Met Leu
 260 265 270
 Val Met Val Ala Leu Phe Phe Thr Leu Ser Trp Leu Pro Leu Trp Ala
 275 280 285
 Leu Leu Leu Ile Asp Tyr Gly Gln Leu Ser Ala Pro Gln Leu His
 290 295 300
 Leu Val Thr Val Tyr Ala Phe Pro Phe Ala His Trp Leu Ala Phe Phe
 305 310 315 320
 Asn Ser Ser Ala Asn Pro Ile Ile Tyr Gly Tyr Phe Asn Glu Asn Phe
 325 330 335
 Arg Arg Gly Phe Gln Ala Ala Phe Arg Ala Arg Leu Cys Pro Arg Pro
 340 345 350

Ser Gly Ser His Lys Glu Ala Tyr Ser Glu Arg Pro Gly Gly Leu Leu
 355 360 365

His Arg Arg Val Phe Val Val Val Arg Pro Ser Asp Ser Gly Leu Pro
 370 375 380

Ser Glu Ser Gly Pro Ser Ser Gly Ala Pro Arg Pro Gly Arg Leu Pro
 385 390 395 400

Leu Arg Asn Gly Arg Val Ala His His Gly Leu Pro Arg Glu Gly Pro
 405 410 415

Gly Cys Ser His Leu Pro Leu Thr Ile Pro Ala Trp Asp Ile
 420 425 430

<210> 2

<211> 432

<212> PRT

<213> Rat

<400> 2

Met Glu Ala Glu Pro Ser Gln Pro Pro Asn Gly Ser Trp Pro Leu Gly
 5 10 15

Gln Asn Gly Ser Asp Val Glu Thr Ser Met Ala Thr Ser Leu Thr Phe
 20 25 30

Ser Ser Tyr Tyr Gln His Ser Ser Pro Val Ala Ala Met Phe Ile Ala
 35 40 45

Ala Tyr Val Leu Ile Phe Leu Leu Cys Met Val Gly Asn Thr Leu Val
 50 55 60

Cys Phe Ile Val Leu Lys Asn Arg His Met Arg Thr Val Thr Asn Met
 65 70 75 80

Phe Ile Leu Asn Leu Ala Val Ser Asp Leu Leu Val Gly Ile Phe Cys
 85 90 95

Met Pro Thr Thr Leu Val Asp Asn Leu Ile Thr Gly Trp Pro Phe Asp

100	105	110
Asn Ala Thr Cys Lys Met Ser Gly Leu Val Gln Gly Met Ser Val Ser		
115	120	125
Ala Ser Val Phe Thr Leu Val Ala Ile Ala Val Glu Arg Phe Arg Cys		
130	135	140
Ile Val His Pro Phe Arg Glu Lys Leu Thr Leu Arg Lys Ala Leu Phe		
145	150	155
Thr Ile Ala Val Ile Trp Ala Leu Ala Leu Leu Ile Met Cys Pro Ser		
165	170	175
Ala Val Thr Leu Thr Val Thr Arg Glu Glu His His Phe Met Leu Asp		
180	185	190
Ala Arg Asn Arg Ser Tyr Pro Leu Tyr Ser Cys Trp Glu Ala Trp Pro		
195	200	205
Glu Lys Gly Met Arg Lys Val Tyr Thr Ala Val Leu Phe Ala His Ile		
210	215	220
Tyr Leu Val Pro Leu Ala Leu Ile Val Val Met Tyr Val Arg Ile Ala		
225	230	235
Arg Lys Leu Cys Gln Ala Pro Gly Pro Ala Arg Asp Thr Glu Glu Ala		
245	250	255
Val Ala Glu Gly Gly Arg Thr Ser Arg Arg Arg Ala Arg Val Val His		
260	265	270
Met Leu Val Met Val Ala Leu Phe Phe Thr Leu Ser Trp Leu Pro Leu		
275	280	285
Trp Val Leu Leu Leu Leu Ile Asp Tyr Gly Glu Leu Ser Glu Leu Gln		
290	295	300
Leu His Leu Leu Ser Val Tyr Ala Phe Pro Leu Ala His Trp Leu Ala		
305	310	315
Phe Phe His Ser Ser Ala Asn Pro Ile Ile Tyr Gly Tyr Phe Asn Glu		

Asn Phe Arg Arg Gly Phe Gln Ala Ala Phe Arg Ala Gln Leu Cys Trp	325	330	335
	340	345	350
Pro Pro Trp Ala Ala His Lys Gln Ala Tyr Ser Glu Arg Pro Asn Arg			
	355	360	365
Leu Leu Arg Arg Arg Val Val Val Asp Val Gln Pro Ser Asp Ser Gly			
	370	375	380
Leu Pro Ser Glu Ser Gly Pro Ser Ser Gly Val Pro Gly Pro Gly Arg			
	385	390	395
Leu Pro Leu Arg Asn Gly Arg Val Ala His Gln Asp Gly Pro Gly Glu			
	405	410	415
Gly Pro Gly Cys Asn His Met Pro Leu Thr Ile Pro Ala Trp Asn Ile			
	420	425	430
<210> 3			
<211> 432			
<212> PRT			
<213> Mouse			
<400> 3			
Met Glu Ala Glu Pro Ser Gln Pro Pro Asn Gly Ser Trp Pro Pro Ser			
	5	10	15
Leu Asn Glu Ser Asp Ala Glu Thr Ala Pro Val Ala Ser Leu Thr Phe			
	20	25	30
Ser Ser Tyr Tyr Gln His Ser Ser Pro Val Ala Ala Met Phe Ile Ala			
	35	40	45
Ala Tyr Ala Leu Ile Phe Leu Leu Cys Met Val Gly Asn Thr Leu Val			
	50	55	60
Cys Phe Ile Val Leu Lys Asn Arg His Met Arg Thr Val Thr Asn Met			
	65	70	75

Phe Ile Leu Asn Leu Ala Val Ser Asp Leu Leu Val Gly Ile Phe Cys
 85 90 95
 Met Pro Thr Thr Leu Val Asp Asn Leu Ile Thr Gly Trp Pro Phe Asp
 100 105 110
 Asn Ala Thr Cys Lys Met Ser Gly Leu Val Gln Gly Met Ser Val Ser
 115 120 125
 Ala Ser Val Phe Thr Leu Val Ala Ile Ala Val Glu Arg Phe Arg Cys
 130 135 140
 Ile Val His Pro Phe Arg Glu Lys Leu Thr Leu Arg Lys Ala Leu Leu
 145 150 155 160
 Thr Ile Ala Val Ile Trp Ala Leu Ala Leu Ile Met Cys Pro Ser
 165 170 175
 Ala Val Thr Leu Thr Val Thr Arg Glu Glu His His Phe Met Leu Asp
 180 185 190
 Ala Arg Asn Arg Ser Tyr Pro Leu Tyr Ser Cys Trp Glu Ala Trp Pro
 195 200 205
 Glu Lys Gly Met Arg Lys Val Tyr Thr Ala Val Leu Phe Ala His Ile
 210 215 220
 Tyr Leu Ala Pro Leu Ala Leu Ile Val Val Met Tyr Ala Arg Ile Ala
 225 230 235 240
 Arg Lys Leu Cys Gln Ala Pro Gly Pro Ala Arg Asp Ala Glu Glu Ala
 245 250 255
 Val Ala Glu Gly Gly Arg Ala Ser Arg Arg Arg Ala Arg Val Val His
 260 265 270
 Met Leu Val Met Val Ala Leu Phe Phe Thr Leu Ser Trp Leu Pro Leu
 275 280 285
 Trp Val Leu Leu Leu Leu Ile Asp Tyr Gly Glu Leu Ser Glu Leu Gln
 290 295 300

Leu His Leu Leu Ser Val Tyr Ala Phe Pro Leu Ala His Trp Leu Ala
 305 310 315 320
 Phe Phe His Ser Ser Ala Asn Pro Ile Ile Tyr Gly Tyr Phe Asn Glu
 325 330 335
 Asn Phe Arg Arg Gly Phe Gln Ala Ala Phe Arg Ala Gln Leu Cys Trp
 340 345 350
 Leu Pro Trp Ala Ala His Lys Gln Ala Tyr Ser Glu Arg Pro Gly Arg
 355 360 365
 Leu Leu Arg Arg Arg Val Val Val Asp Val Gln Pro Ser Asp Ser Gly
 370 375 380
 Leu Pro Ser Glu Ser Gly Pro Ser Ser Gly Val Pro Gly Pro Asn Arg
 385 390 395 400
 Leu Pro Leu Arg Asn Gly Arg Val Ala His Gln Asp Gly Pro Arg Glu
 405 410 415
 Gly Pro Gly Cys Asn His Met Pro Leu Thr Ile Pro Ala Trp Asn Ile
 420 425 430
 <210> 4
 <211> 180
 <212> PRT
 <213> Human
 <400> 4
 Met Glu Ile Ile Ser Ser Lys Leu Phe Ile Leu Leu Thr Leu Ala Thr
 1 5 10 15
 Ser Ser Leu Leu Thr Ser Asn Ile Phe Cys Ala Asp Glu Leu Val Met
 20 25 30
 Ser Asn Leu His Ser Lys Glu Asn Tyr Asp Lys Tyr Ser Glu Pro Arg
 35 40 45
 Gly Tyr Pro Lys Gly Glu Arg Ser Leu Asn Phe Glu Glu Leu Lys Asp

50	55	60
Trp Gly Pro Lys Asn Val Ile Lys Met Ser Thr Pro Ala Val Asn Lys		
65	70	75
Met Pro His Ser Phe Ala Asn Leu Pro Leu Arg Phe Gly Arg Asn Val		
	85	90
		95
Gln Glu Glu Arg Ser Ala Gly Ala Thr Ala Asn Leu Pro Leu Arg Ser		
100	105	110
Gly Arg Asn Met Glu Val Ser Leu Val Arg Arg Val Pro Asn Leu Pro		
115	120	125
Gln Arg Phe Gly Arg Thr Thr Thr Ala Lys Ser Val Cys Arg Met Leu		
130	135	140
Ser Asp Leu Cys Gln Gly Ser Met His Ser Pro Cys Ala Asn Asp Leu		
145	150	155
Phe Tyr Ser Met Thr Cys Gln His Gln Glu Ile Gln Asn Pro Asp Gln		
	165	170
		175
Lys Gln Ser Arg		
	180	